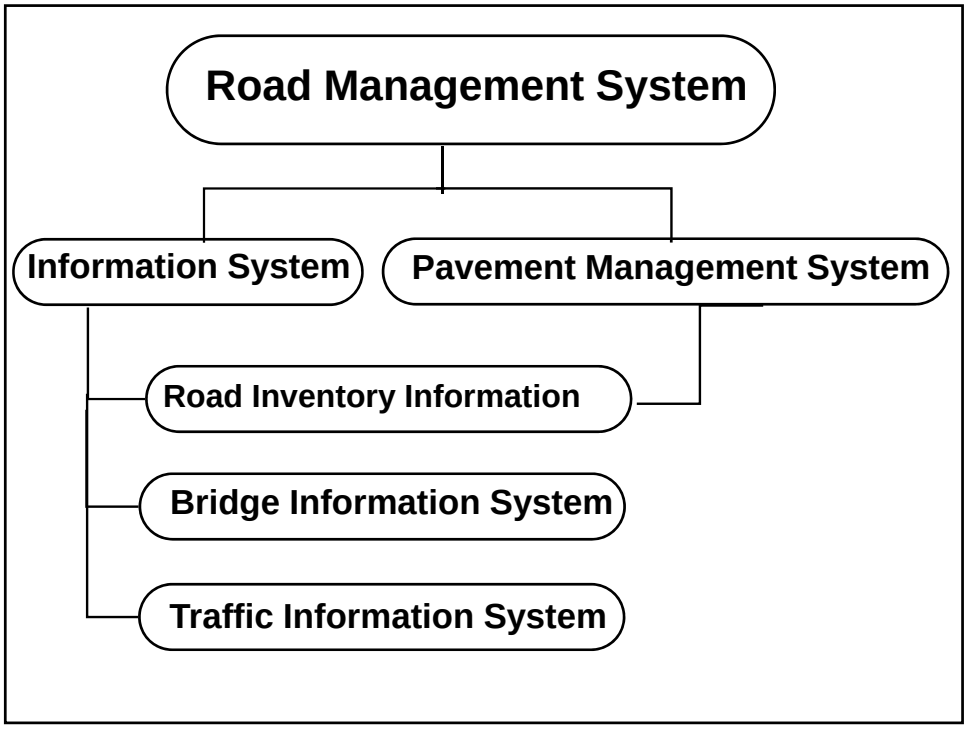
Concepts of Road Management System

Road Management Systems (RMS)

- System used to store and process road data for highway planning and programming

- The Methodology to identify, prioritise and address maintenance and planning decisions of road network using computerised technical tools systematically



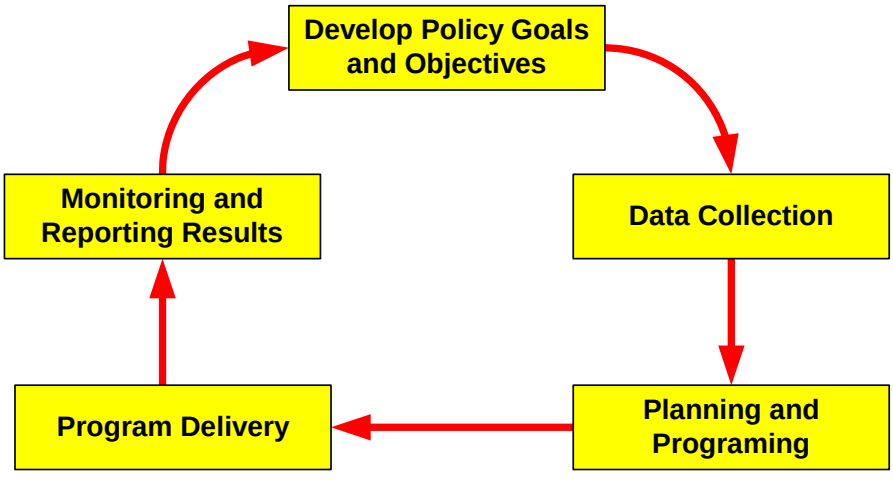
- **Road Information System**
  - Road Inventory Information
  - Road Asset Information
  - Road Condition Information
  - Traffic Information
  - Bridge Information
  - Accident Information

- **Pavement Management System**
  - **Optimisation & Prioritisation of upgrading & maintenance works including budget planning**
  - **Life cycle cost approach**
  - **Uses the inventory and traffic information**
  - **Computerised planning tools**

Key elements of RMS

- Strategic Goals
- Inventory
- Performance Indicators
- Prediction tools
- Decision analysis
- Optimisation tool
- Links to budget process

ROAD ASSET MANAGEMENT CYCLE



Asset management is a process to strategically manage a transportation system in a cost-effective and efficient manner

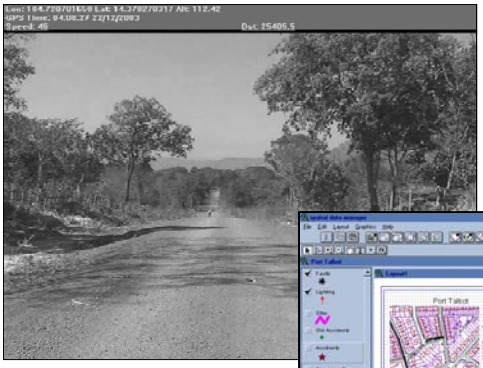
Objectives of RMS

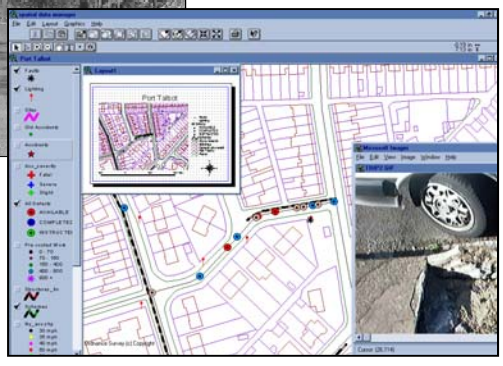
- Operating road network with minimum cost and high efficiency
- Life cycle support to the road network management
- Accurate Information to the managers
- **Managing Road Asset is important for economic development**
  - **Cost effective**
  - **Strategic**
  - **Efficient**

RMS in the Planning Process

- Reliable database
- Rational work programmes
- Field inspections to refine the programme
- Forward Programming

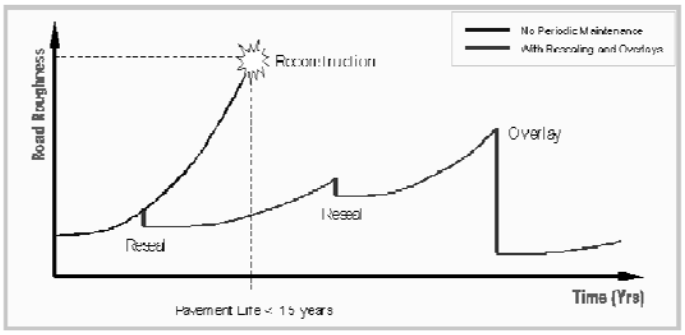
Multi-media Data

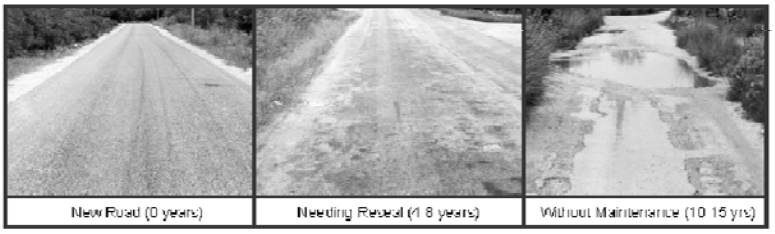




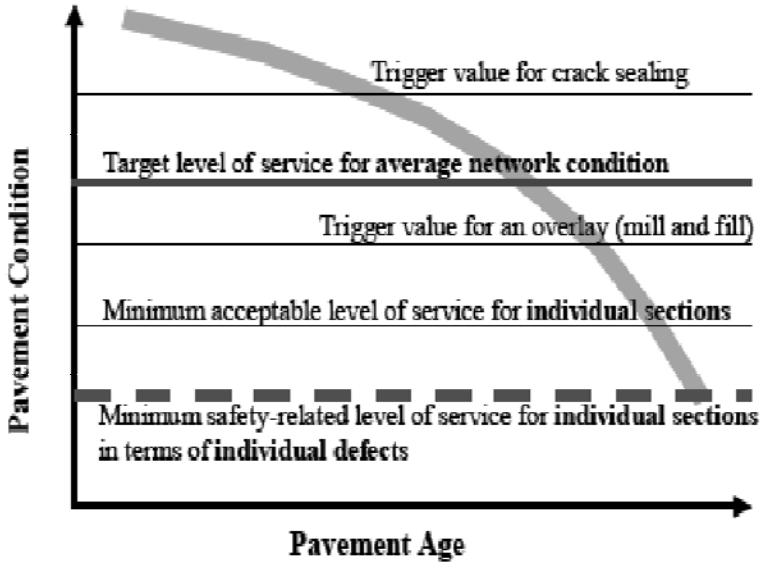
Store and display multi-media data, often through GIS

Life Cycle of Pavement

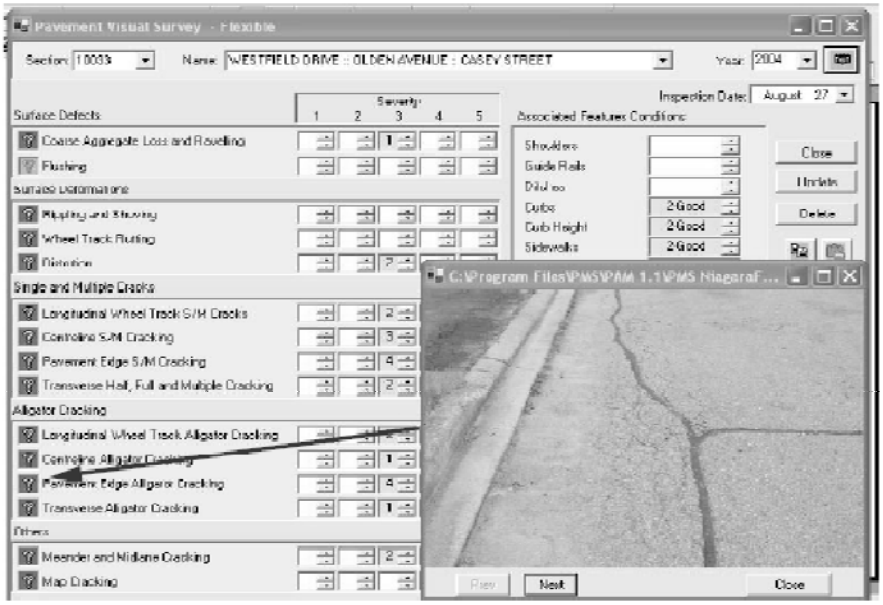


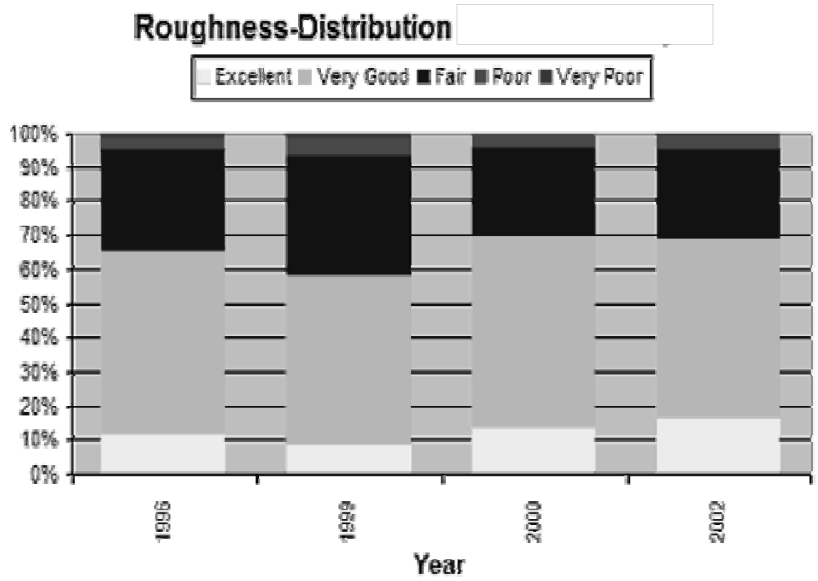


Criteria for Pavement Management

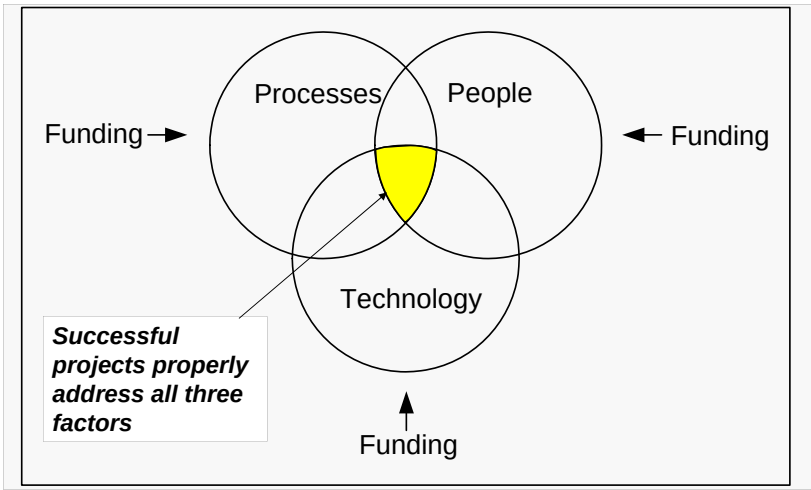


Pavement Condition record





The Key to Success



Processes

Success Factor

– The RMS must have an active role in the agency

- **To Achieve this,**
  – The RMS must be an integral part of the agency's monitoring and planning process
  – Outputs should be used to prepare annual reports to ensure data are regularly collected and the system applied

Technology

- Key Success Factor:
  - **The IT components should be appropriate**
- To Achieve This:
  - Need a strong IT division – or outsource
  - RMS must fit into IT strategy

People

- Key Success Factor:
  - **The RMS must be fully institutionalized and supported**
- To Achieve This:
  - There must be an organizational unit to manage, monitor and continually improve the RMS

Applications of RMS

- Annual Reports
  - Key Performance INDICATORS
  - Five year Goals
  - Annual Asset Management Plans
  - Financial Plans
- Budget Preparations
  - Unconstrained Budget
  - Justifications for funds requested
  - Prioritisations

Applications of RMS

- **Asset Preservation (Maintenance)**
  - Upkeeping of the assets
  - Minimum standards
- **Asset Value**
  - Measuring the value of Infrastructure
  - Key performance indicator
  - Goals and Objectives
  - Compare different investments

RMS being developed by HD

- Web enabled
- HQ to subdivision
- Road Details –sub division, division and Circle
- Separate interfaces
- Remote updating
- Public use

RMS

- Sub data base of cross drainage structures and conditions
- Traffic Information
- Road Condition Index
- Automatic sectioning process

Information to the Stakeholders

- Districtwise Road Name with length
- Critical Inventory Information
- Lane details
- Condition index
- Traffic details
- Budget for road works
- Work Programme

Further expectations of Stakeholders ?